In the Claims

Please cancel claims 1-14 and 28 without prejudice.

Please amend claims 15-17, 19-22, 25-27, 29, 31 and 33 of the application, wherein any additions the amended claims are underlined and any deletions to the amended claims are presented either as struckthrough text or within double brackets:

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Currently Amended) A method for forming micropatterns as claimed in Claim ~~6 or 7~~ 40, wherein the method comprises, after etching the region of the substrate having no mixed film formed thereon for the predetermined amount, selectively removing the remaining mixed film by sputter etching.

16. (Currently Amended) A method for forming micropatterns as claimed in Claim ~~6 or 7~~ 40, wherein the mixed film is formed in a region smaller than the spot diameter of the irradiated converged optical beam.

17. (Currently Amended) A method for forming micropatterns as claimed in Claim [[7]] 41, wherein the transparent film forms an antireflection structure with respect to the irradiated converged optical beam.

18. (Original) A method for forming micropatterns as claimed in Claim 17, wherein the transparent film is made of AlN.

19. (Currently Amended) A method for forming micropatterns as claimed in Claim ~~6 or 7~~ 40, wherein the substrate is made of Si or SiO_2, and the metallic film is made of one selected from the group consisting of Al, Co, and Pd.

20. (Currently Amended) A method for forming micropatterns as claimed in Claim [[4]] 42, wherein the substrate is selectively etched simultaneously with the etching of the mask layer, or after etching the mask layer.

21. (Currently Amended) A method for forming micropatterns as claimed in Claim [[4]] ~~or 20~~ 42, wherein the mixed layer is formed in a region smaller than the spot diameter of the irradiated converged optical beam.

22. (Currently Amended) A method for forming micropatterns as claimed in Claim [[4]] ~~or 20~~ 42, wherein after forming the metallic film, a transparent film is formed on the metallic film before irradiating the converged optical beam.

23. (Original) A method for forming micropatterns as claimed in Claim 22, wherein the metallic film and the transparent film form an antireflection structure with respect to the irradiated converged optical beam.

24. (Original) A method for forming micropatterns as claimed in Claim 22, wherein the transparent film is made of AlN.

25. (Currently Amended) A method for forming micropatterns as claimed in Claim [[4]] ~~or 20~~ 42, wherein the mask layer is made of Si, SiN, or SiO_2, and the metallic film is made of Al, Co, Fe, Ni, Pd, or Ti.

26. (Currently Amended) A method for forming micropatterns as claimed in Claim [[4]] ~~or 20~~ 42, wherein the remaining mixed layer is selectively removed by sputter etching.

27. (Currently Amended) A method for forming micropatterns as claimed in Claim [[3]] 43, wherein the mixed film is formed in a region smaller than the spot diameter of the irradiated converged optical beam.

28. (Canceled)

29. (Currently Amended) A method for forming micropatterns as claimed in Claim [[3]] ~~or 27~~ 43, wherein, after forming the heat-sensitive multilayer film, a transparent film is formed on the heat-sensitive multilayer film before forming the mixed film.

30. (Original) A method for forming micropatterns as claimed in Claim 29, wherein the heat-sensitive multilayer film and the transparent film form an antireflection structure with respect to the irradiated converged optical beam.

31. (Currently Amended) A method for forming micropatterns as claimed in Claim [[28]] <u>44</u>, wherein said substrate is made of Si or SiO_2, said metallic film is made of Al, Co, or Pd, and the non-metallic film is made of Si or SiO_2.

32. (Original) A method for forming micropatterns as claimed in Claim 29, wherein the transparent film is made of AlN.

33. (Currently Amended) A method for forming micropatterns as claimed in Claim [[3]] ~~or 27~~ <u>43</u>, wherein the method further comprises, after selectively removing the portion of the heat-sensitive multilayer film other than the mixed film, etching a region of the substrate having no mixed film formed thereon by using the remaining mixed film as a mask.

34. (Original) A method for forming micropatterns as claimed in Claim 33, wherein the method further comprises, after etching the region of the substrate, selectively removing the remaining mixed film by sputter etching.

35. (Withdrawn) An optical disk master produced by using the method for forming micropatterns as claimed in any one of Claims 1 to 7.

36. (Withdrawn) An optical disk stamper produced by using the optical disk master as claimed in Claim 35.

37. (Withdrawn) A work stamper for optical disks produced by forming an electrocasted film using the optical disk stamper as claimed in Claim 45 as an electrode, and peeling off the electrocasted film from the optical disk stamper.

38. (Withdrawn) An optical disk produced by using the optical disk stamper as claimed in Claim 36.

39. (Withdrawn) An optical disk produced by using the optical disk stamper as claimed in Claim 37.

Please add the following new claims:

40. (New) A method for forming micropatterns, comprising the steps of:

irradiating a thin film formed on a substrate with an energy beam to elevate the temperature of an interface between the thin film and the substrate to a predetermined temperature or higher and thereby form a mixture region of the thin film and the substrate at the interface; and

patterning at least the thin film in such a manner to leave over the mixture region,

wherein the thin film is formed of a metallic film, a mixed film is formed of the metallic film and the substrate at an interface between the metallic film and the substrate whose temperature is elevated to the predetermined temperature or higher by irradiation with the energy beam, only the metallic film is selectively removed, and a region of the substrate having no mixed film formed thereon is etched by a predetermined amount so that the mixed film and the underlying substrate are left over.

41. (New) A method for forming micropatterns, comprising the steps of:

irradiating a thin film formed on a substrate with an energy beam to elevate the temperature of an interface between the thin film and the substrate to a predetermined temperature or higher and thereby form a mixture region of the thin film and the substrate at the interface; and

patterning at least the thin film in such a manner to leave over the mixture region,

wherein the thin film is formed of a metallic film and a transparent film formed on the metallic film, a mixed film is formed of the metallic film and the substrate at an interface between the metallic film and the substrate whose temperature is elevated to the predetermined temperature or higher by irradiation with the energy beam, the metallic film and the transparent film are selectively removed, and a region of the substrate having no mixed film formed thereon is etched by a predetermined amount so that the mixed film and the underlying substrate are left over.

42. (New) A method for forming micropatterns, comprising the steps of:

irradiating a thin film formed on a substrate with an energy beam to elevate the temperature of a region of the thin film to a predetermined temperature or higher and thereby modify the region of the thin film, and

patterning at least the thin film in such a manner to leave over the modified region,

wherein the thin film is formed of a mask layer and a metallic film formed on the mask layer, a mixed layer is formed of the mask layer and the metallic film at an interface between the mask layer and the metallic film whose temperature is elevated to the predetermined temperature or higher by irradiation with the energy beam, the metallic film is selectively removed, and a region of the mask layer having no mixed layer formed thereon is selectively etched so that the mixed layer is left over.

43. (New) A method for forming micropatterns, comprising the steps of:

irradiating a thin film formed on a substrate with an energy beam to elevate the temperature of a region of the thin film to a predetermined temperature or higher and thereby modify the region of the thin film; and

patterning at least the thin film in such a manner to leave over the modified region,

wherein the thin film is formed of a heat-sensitive multilayer film, a mixed film is formed in a region of the heat-sensitive multilayer film whose temperature is elevated to the predetermined temperature or higher by irradiation with the energy beam, and a region of the heat-sensitive multilayer film other than the mixed film is selectively removed to leave over the mixed layer on the substrate.

44. (New) A method for forming micropatterns, comprising the steps of:

irradiating a thin film formed on a substrate with an energy beam to elevate the temperature of a region of the thin film to a predetermined temperature or higher and thereby modify the region of the thin film; and

patterning at least the thin film in such a manner to leave over the modified region,

wherein the thin film is formed of a heat-sensitive multilayer film, a mixed film is formed in a region of the heat-sensitive multilayer film whose temperature is elevated to the predetermined temperature or higher by irradiation with the energy beam, and a region of the heat-sensitive multilayer film other than the mixed film is selectively removed to leave over the mixed layer on the substrate, and

wherein the heat-sensitive multilayer film has a multilayered film structure comprising at least one metallic film and at least one non-metallic film which are alternately laminated, and the mixed film is formed by alloydizing the metallic film and the non-metallic film elevated to the predetermined temperature or higher.